

RADIALLY-EXPANDABLE PTFE TAPE-REINFORCED VASCULAR GRAFTS

Abstract of the Disclosure

Sup 5a²

A tape-reinforced tubular vascular graft formed of sintered fluoropolymer(s), such as expanded, sintered PTFE. The graft includes a base graft and a reinforcing tape applied thereto. The tape may be spirally wrapped about the graft or spirally wrapped into a tube about a cylindrical mandrel and then applied to the exterior of the graft. Radial shrinkage of the combined base graft and tape, or of the reinforcing tape tube, renders the vascular graft subsequently radially enlargeable by more than 5%, without tearing or breaking of the reinforcement tape layer of the graft. Radially enlargeable grafts of the present invention may be combined with various types of stents or anchoring systems, to form endovascular graft devices which are transluminally insertable and implantable within the lumen of a host blood vessel. Alternatively, radially enlargeable grafts of the present invention may be implanted by way of traditional surgical graft implantation techniques, without any radial enlargement of the graft at the time of implantation, so as to take advantage of the improved strength properties and suture-holding properties of the radially-shrunken tape-reinforced grafts of the present invention.